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EL&P

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VOICE OF THE ELECTRIC UTILITY INDUSTRY

1987 was no winner for Top 100 utilities

BARRINGTON, IL—The year 1987 was a real downer for the nation's largest investor-owned electric utilities. After recovering in 1986 from a financially disasterous 1985, last year was a severe disappointment as net incomes and earnings for common stock fell sharply despite small gains in customers and kilowatthour sales.

The brightest aspect of *Electric Light & Power's* 23rd annual survey of the industry's Top 100 Electric Utilities, beginning on page 13, was that the quality of earnings was better.

Per-share earnings and net incomes both fell in 1987. Average common stock earnings of $2.23 were off almost 15 percent and after-tax net incomes dropped 7.4 percent from 1986 levels. The reductions reflect essentially flat revenue growth, commission-mandated rate cuts, increased costs of business, changes in accounting procedures and non-recurring charges. The latter includes write-offs of non-recoverable costs of power plants judged by state commissions to be unneccessary and/or improperly managed during construction.

Per-share earnings were down 31.8 percent from the 1984 high.

Total revenues of the Top 100 Electric Utilities barely increased in 1987, climbing just 0.5 percent, to $150-billion. The flat performance reflects reductions in fuel-adjustment charges, commission-ordered cuts in rates and changes in accounting procedures resulting from federal corporate income tax law revisions. Revenues from utility operations only were up even less.

Revenue growth was disappointing in light of recorded gains in customers served and kilowatthour sales. Sales increased to 2.1-billion kWh, a 3.5 percent increase and a rate that now is accepted as healthy. However, total customers served grew by 2 percent, leaving the actual increase in customer use at just 1.5 percent.

LATE NEWS

Middle South Utilities Inc. plans for its wholly-owned subsidiary, System Energy Resources Inc. to assume management and operating responsibility for MSU's four nuclear units. SERI now operates and is principal owner of Grand Gulf Unit 1. It would operate Arkansas Power & Light's two units, and Louisiana Power & Light's Waterford 3. MSU hopes to strengthen nuclear management, lower operating costs and improve financial performance by the move. Regulatory approvals are expected by the end of the year.

Green Mountain Power Corp. has solicited bids for 100 MW from both power suppliers and contractors who would implement load management and pilot conservation programs. GMP is the first Vermont utility and one of the first nationwide to simultaneously solicit bids to compare the relative costs of additional power and conservation. The initiative complements state regulators' least-cost resource goals.

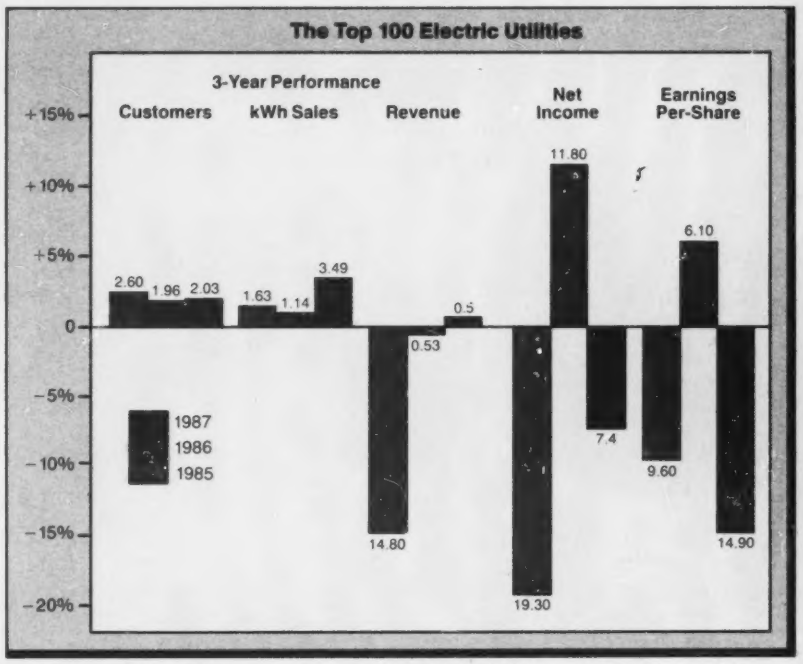
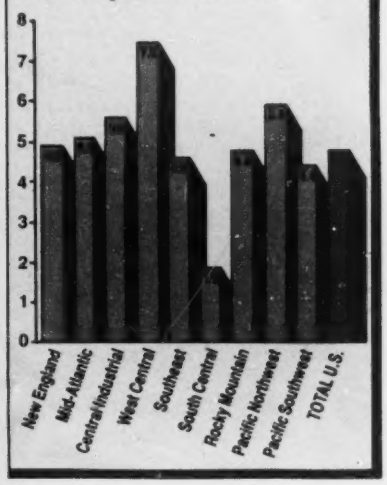


Chart shows relative performances of the Top 100 Electric Utilities over the past three years.

ELECTRICAL OUTPUT

West Central states (mainly IA, KS, MN, MO, NB, ND, SD) increased net total electric output by 7.2%, leading the 10 geographical regions, according to the Edison Electric Institute. The figures for the contiguous United States are the percentage increases during the 52-week period ending April 23, 1988, compared to the same period in 1987. The South Central region's grew the least, with only 1.9%. Comparing the first 13 weeks of '87 and '88, net U.S. output increased 6.1%.



RTE 'OKs' offer by Cooper Industries

HOUSTON—RTE Corp. and Cooper Industries Inc. have agreed to a reorganization under which Cooper Power Acquisition Corp., a wholly owned Cooper subsidiary, would acquire RTE at a net cash price of $45 per share for all outstanding shares.

RTE is one of the Big Three suppliers of distribution transformers for the electric utility industry, as well as a variety of other electrical and electronic products for industry. Cooper Industries is a large diversified manufacturer, and the parent of McGraw-Edison Company.

As part of a May 9 decision, RTE's board recommended unanimously that shareholders accept the offer, which amounts to about $330 million.

Cooper outpriced a Mark IV Industries Inc. offer of $36-per-share, increased from an April bid of $33. Mark IV, based in West Amherst, NY, is a aerospace and defense products manufacturer.

Brookfield, WI-based RTE had recommended rejection of both Mark IV offers and sought alternatives after the first one. RTE Treasurer Douglas Haag called the $36-per-share offer inadequate.

Cooper's offer ex-

Continued on page 32

State/LILCo negotiate

PASNY power; kill Shoreham; rates up

HICKSVILLE, NY—Long Island Lighting Co. may soon announce a deal with the state to close its Shoreham nuclear plant, in exchange for a rate plan of 5-percent annual increases from 1989 to 1998, said Gov. Mario Cuomo. Also, the state's New York Power Authority would assist in financing, building and operating gas turbines and baseload generating plants to provide added LILCo power requirements.

Meanwhile, the Long Island Power Authority continues its takeover bids for LILCo, having offered $12 a share, raised from $10 and $8.75.

LILCo officials rejected two lower LIPA offers. The latest offer was to expire May 31. To apply further pressure, LIPA nominated three candidates for LILCO's nine-director board, but if proxy vote counting mirrors sentiments expressed at the May 17 annual meeting, LIPA's attempt at board seats or a takeover would fail.

LILCo continued to pursue licensing, encouraged by recent positive NRC board decisions. Chairman William Catacosinos reaffirmed his commitment to Shoreham, but is continuing negotiations with the state. Cuomo has said that under its settlement plan, rates should be comparable to what LIPA could offer, after a management reorganization, and a Shoreham shutdown.

Details of talks with the state have not been released, though Catacosinos said that LILCo would discuss options with the community soon.

"It could go in any direction at this point," said Rumelia F. Lodia, utility analyst with Duff & Phelps Inc. in Chicago. Lodia said that after LILCo's January writeoffs, its book value was near $18 billion.

Lodia said she anticipates shareholders to ask LILCo officials about the possible sale at the May 17 annual meeting.

LIPA, locally controlled, said after the friendly offers that it would consider a

Continued on page 25

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News Briefs

JILL MINNER, Assistant Editor

Delays at Braidwood 1, and Byron-2 increased costs, say audit firms

Auditors said that delays at Commonwealth Edison Company's Braidwood 1 and Byron 2 nuclear plants increased costs by $872 million and $400 million respectively. A rate base exclusion of $278 million was recommended for Braidwood 1, and an exclusion of between $119 million and $181 million was recommended for Byron 2. The audit firms, O'Brien-Kreitzberg & Associates, Inc. and Arthur Young and Co., also said that a portion of the increased costs were offset by other economic benefits to customers. Commonwealth Edison said it disputes the auditors' recommendations and plans to file independent testimony supporting its position. At press time, the Illinois Commerce Commission had not yet decided whether the audits should be considered as a separate matter or worked into the current rate proceeding (see p. 28).

PNM to compromise on restructuring plan

Public Service Co. of New Mexico (PNM) has filed a settlement offer with the New Mexico Public Service Commission, as a compromise to its company restructuring plan. PNM said it would support a settlement plan which calls for: an immediate $19-million rate decrease; complete exclusion of the Palo Verde nuclear generating station from rates to its New Mexico customers; a 10-year phase-in of 147 MW of additional power from the San Juan generating station; and reorganization of the utility under a holding company structure. PNM also said that after the initial rate cut, it would need small rate increases at the end of 18 and 36 months. At press time, the proposed settlement was awaiting commission approval.

California LMUD buys PG&E power for sale to CP National customers

Calfornia's Lassen Municipal Utility District is now supplying power to 10,000 former CP National electric customers, according to the American Public Power Association (APPA). The Lassen MUD, created in November 1986, recently paid CP National $19.9 million for electric facilities in three California counties. APPA said the new municipal utility will purchase its power wholesale from Pacific Gas & Electric Co., and that customers will enjoy a 50 percent reduction in electric rates.

Puget Power and WWP sign power contract

Puget Sound Power & Light Co. has signed a 15-year contract with Washington Water Power Co. (WWP) for the purchase of an average of 75 MW per year. Puget Power's Director of Power Planning, Rich Lauckhart, said the long-term contract gives WWP a market for its power surplus while providing Puget Power with energy for its growing customer base. "What's unusual about this contract is the pricing. Rather than paying the cost of power generated by Washington Water Power's most expensive resource, we're paying the average cost of its generating and transmission facilities," added Lauckhart.

PCI forms subsidiary

Potomac Capital Investment Corp. (PCI) announced that it has formed a new subsidiary, American Energy Corp., to pursue investments in alternative energy projects. Peter H. Benziger will serve as CEO of American Energy and William J. Sim will serve as president. Benziger is senior vice president-generation for Potomac Electric Power Co. (PEPCO) and Sim was previously the utility's manager of generating construction. PCI is a wholly-owned subsidiary of PEPCO.

PP&L's Susquehana 2 sets GE record

The Susquehana 2 nuclear plant achieved a 93.5-percent capacity factor in 1987, making it the 'best performing' General Electric-supplied boiling water reactor, according to GE. Unit 2 began commercial operation in 1985. Owners of the Susquehana station include Pennsylvania Power & Light Co. (90 percent) and Allegheny Electric Cooperative (10 percent).

Centerior names new management team

Richard A. Miller

Robert J. Farling

A new management team has been announced at Centerior Energy Corporation. Richard A. Miller, president of Centerior, will serve as CEO and Robert J. Farling will take over as president. Lyman C. Phillips succeeds Farling as president of Cleveland Electric Illuminating Co., a subsidiary of Centerior. Murray R. Edelman will replace Phillips as president of Toledo Edison, another of Centerior's subsidiaries. According to the company, these and other changes were made to help Centerior through a difficult period of inadequate rate increases and a reduction in the common stock dividend. Other changes include an ongoing cost-cutting program and a financial restructuring.

EEI honors utilities for affirmative action work

The Edison Electric Institute recently awarded seven electric utilities for "programs demonstrating outstanding achievement and commitment to affirmative action." Utilities receiving top honors included: Puget Sound Power & Light Co. for its *Veterans' Assistance Program*; Cleveland Electric Illuminating Co. for its *Enabling the Disabled* program; and Public Service Electric and Gas Co. for its *Women Working Technical Program*. Awards given for 'meritorious achievement' went to: Tampa Electric Co., New England Electric System, Duke Power Co., and Pacific Gas and Electric Company.

Disaster Congress & Expo to be held in Nov.

The First International Disaster Congress & Exposition will take place November 9-11 in Chicago's McCormick Place. According to organizers Kotch & Poliak, Inc., the event will focus on methods and products for coping with five major disaster areas: natural phenomena, deliberate violence, technological hazards, human contagion and government conduct. For more information contact: Kotch & Poliak, 708 Third Ave., New York, NY, 10017; (212) 557-6950.

Palo Verde sets second 1988 generating record

Arizona Nuclear Power Project (ANPP) announced that, for the second time this year, its Palo Verde 3 nuclear unit has set an industry generating record. Unit 3 produced 995,400 MWh of electricity during March, surpassing the record set by Palo Verde 2 in October 1986. ANPP said Unit 2 had generated 987,300 MWh of electricity.

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Voters may close Rancho Seco; Duke to operate SMUD plant?

Mark T. Hoske
Assistant Editor

SACRAMENTO—The vote looks like a close one!

On June 7, Sacramento Municipal Utility District voters may decide to permanantly pull the plug on the Rancho Seco nuclear power plant, scheduled in June for 40-percent capacity operation after two years and $400 million in improvements.

Or, they may approve indefinite operation. Or they could allow operations for 18 months under strict conditions, including a later option to close it or tranfer ownership in order to reduce the district's financial risk (*EL&P*, April, p.3). If one of these options does not appear a clear winner out of the two separate referendum votes, the matter may end up in court.

Continued on page 24

Mergers could save consumers $3.65B yearly

NEW YORK—Consumers could save at least $3.55 billion annually—$54.13 each per year—if 136 of the nation's major investor-owned electric utilities consolidated into 41 larger, more efficient companies, according to a 82-page study released by the Wall Street investment firm of Shearson Lehman Hutton.

The mergers could also generate an additional, one-time, $15.9 billion for investors if utilities were to liquidate their surplus assets at the current rate of 1.5-times book value, says Edward J. Tirello Jr., senior vice president of equity research, who directs utility analysis for the brokerage firm. Tirello commissioned the engineering-analysis study and believes it to be the first of its type.

"We've been saying for some time that we believe the competitive forces re-

Continued on page 17

Possible Consolidation Groups

CAROLINA GROUP
Carolina Power & Light
Nantahala Power & Light
Duke Power
South Carolina Electric & Gas

NEW JERSEY GROUP II
Metropolitan Edison
Pennsylvania Electric
Pennsylvania Power & Light
UGI Corp.

ARIZONA GROUP
Arizona Public Service
Tucson Electric Power

COLORADO GROUP
Western Division, Centel
Cheyenne Light Fuel & Power
Public Service Company of Colorado

DAKOTA GROUP
Montana-Dakota Utilities
Northwestern Public Service
Otter Tail Power

EASTERN GROUP
Blackstone Valley Utilities
Concord Electric
Fitchburg Gas & Electric Light
Brocton Electric
Exeter & Hampton Electric
Newport Electric

FLORIDA GROUP
Florida Power & Light
Florida Public Utilities
Tampa Electric

ILLINOIS GROUP
Central Illinois Light
Central Illinois Public Service
Illinois Power

INDIANA GROUP
Indianapolis Power & Light
Public Service Company of Indiana
Southern Indiana Gas & Electric

IOWA GROUP
Iowa Electric Light & Power
Iowa-Illinois Gas & Electric
Iowa Power and Light
Iowa Public Service
Iowa Southern Utilities

KANSAS GROUP
Kansas Gas & Electric
Kansas Power & Light
Western Power-Centel

KENTUCKY GROUP
Kentucky Utilities
Louisville Gas and Electric
Old Dominion Power

LOUISIANA GROUP I
Central Louisiana Electric
Gulf States Utilities (LA portion)

LOUISIANA GROUP II
Gulf States Utilities (Texas Portion)
Houston Industries Light & Power

MAINE GROUP
Bangor Hydro-Electric
Central Maine Power
Maine Public Service

MICHIGAN GROUP
Alpena Power
Consumers Power
Detroit Edison
Northern Indiana Public Service

MIDSOUTH GROUP
Arkansas Power & Light
Louisiana Power & Light
Mississippi Power & Light
New Orleans Public Service

MINNESOTA GROUP
Interstate Power
Minnesota Power & Light
Northern States Power (combined)
Superior Water, Light & Power

MISSOURI GROUP I
Empire District Electric
UtiliCorp United

MISSOURI GROUP II
Kansas City Power & Light
St. Joseph Light & Power
Union Electric

NEW ENGLAND GROUP
Massachusetts Electric
Narragansett Electric
New England Electric
Public Service Company of New Hampshire

NEW JERSEY GROUP I
Atlantic City Electric
Jersey Central Power & Light
Public Service Electric & Gas

NEW YORK NORTH GROUP I
New York State Electric & Gas
Orange and Rockland Utilities
Rochester Gas & Electric
Rockland Electric*

NEW YORK NORTH GROUP II
Niagara Mohawk Power

NEW YORK SOUTH GROUP
Central Hudson Gas & Electric
Consolidated Edison Company of New York

NORTHEAST GROUP
Boston Edison
Holyoke Water Power
Connecticut Light & Power
United Illuminating
Western Massachusetts Electric

OHIO GROUP I
Appalachian Power
Cincinnati Gas & Electric
Dayton Power & Light
Indiana and Michigan Electric
Kentucky Power
Kingsport Power
Michigan Power
Ohio Power
Union Light, Heat and Power
Wheeling Electric

OHIO GROUP II
Cleveland Electric Illuminating
Dusquesne Light
Ohio Edison
Pennsylvania Power
Toledo Edison

PACIFIC NORTHWEST GROUP I
Black Hills Power and Light
Pacific Power & Light
Utah Power & Light
Portland General Electric
Puget Sound Power & Light

PACIFIC NORTHWEST GROUP II
Idaho Power
Montana Power
Sierra Pacific Power
Washington Water Power

PACIFIC NORTHWEST GROUP III
California Public Utilities
Pacific Gas and Electric

PHILADELPHIA GROUP
Conowingo Power
Philadelphia Electric

POTOMAC GROUP
Baltimore Gas & Electric
Potomac Electric Power
Delmarva Power & Light

SOUTHERN CALIFORNIA GROUP
Nevada Power
Southern California Edison
San Diego Gas & Electric

TEXAS GROUP I
El Paso Electric

TEXAS GROUP II
Central Power & Light
Public Service Co. of Oklahoma
Southwestern Electric Power
Southwestern Public Service
Texas-New Mexico Power
West Texas Utilities

TEXAS GROUP III
Initially, Texas-New Mexico Power, which was ultimately merged into Texas Group II.

TEXAS GROUP IV
Southwestern Electric Service
Part of Texas - New Mexico Power
Texas Utilities

VERMONT GROUP
Central Vermont Public Service
Green Mountain Power

VIRGINIA GROUP
Monongahela Power
Potomac Edison
Virginia Electric and Power
West Penn Power

WISCONSIN GROUP
Madison Gas & Electric
Wisconsin Electric Power
Wisconsin Power & Light
Wisconsin Public Service

Source: Shearson, Lehman, Hutton's "Electric Utilities: The Case for Consolidation."

Commission Cost Disallowances For Selected Operating Nuclear Plants

Company	Plant	Cost/kW	% Disallowance	Commission
NMK, CNH, LIL, RGS, NGE	Nine Mile Pt-2	$5501	39%	NY
GTU	River Bend	4000	35	LA
ATE	Hope Creek	4000	9	NJ
PEG	Hope Creek	4000	11	NJ
SO	Vogtle-1	3650	15	GA
PE	Limerick-1	3500	12	PA
CONN L&P, UIL	Millstone	3260	9	CT
CTP	Millstone	3260	15	ME
W. MASS	Millstone	3260	15	MA
DTE	Fermi-2*	2796	13	MI
KGE, KLT	Wolf Creek	2600	10	MO
KGE, KLT	Wolf Creek	2600	10	KS
MSU	Waterford	2572	10	LA
SCE	Palo Verde	2500	2	CA
UEP	Callaway	2300	17	MO
CWE	Byron-1	2200	4	IL
SDO, SCE	San Onofre	2050	6	CA
PPL	Susquehana-1	1960	12	PA
PPL	Susquehana-2	1960	35	PA

Source: Duff & Phelps Inc. *Costs-to-Date

Flexibility is key to utility's success

CHICAGO—Flexibility of investments, fuel mix and supply planning, as well as the ability to operate within the regulatory/legal environment and improve management are now key determinants of success for electric utilities, says a leading analyst.

Competition will not lead to a breakdown of the industry, as some suggest, according to Linda S. Caldwell, utility analyst at Duff & Phelps Inc. Although the rules have changed slightly, the game is the same—management's biggest challenge will be dealing with the regulatory environment, she claims.

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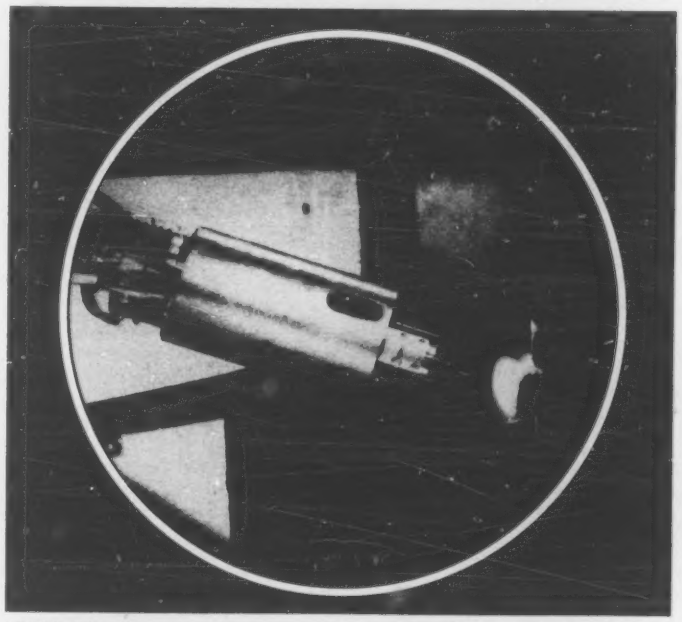
IN A TIGHT SPOT...



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Inquire R.S. 41

Consolidations and mergers: Will rhyme or reason prevail?

We are approaching the time, it is said, when the combined weights of internal debt, over- or under-capacities, limited rates of return and a variety of other problems will cause utilities to consider the benefits of mergers or other consolidations. In fact, says Shearson Lehman Hutton's Ed Tirello (see article on previous page), that time is already here.

Utility customers could profit to the tune of $3.6 billion per year or more if the nation's investor owned electric utilities should consolidate into some 41 larger, more-efficient operating companies. Investors could pocket another $16 billion if those consolidated utilities would sell off duplicated, surplus assets.

It's tough to argue with such suggestions. Certainly, where a merger or consolidation of two or more operating companies truly makes good operating and economic sense, who can oppose it? And why would anyone want to?

But cases of such clear-cut benefits are not the norm. More often, for every benefit that would result from a merger, there is a corresponding disadvantage. The final evaluation depends on the relative weightings applied to both pros and cons.

In the real world, financially weak companies may have far more to gain than the larger, stronger company they'd like to merge with, and may have to pay a large price for the added security. Utilities with strong customer and sales growth can cut their own deals with over-capacitied utilities. Strengths and weaknesses are all relative, and we all know how difficult some relatives can be to deal with.

Ultimately, the people who make merger decisions are not economists, financial analysts, or regional planners. Nor do they make such far-reaching decisions altruistically. They tend to be specialists in one thing, running a company...one company...their company...and they see things in terms of how they themselves will be affected.

Management ego is tough to deny. It's what makes chief executive officers decision-makers. And its going to be the stumbling block in the way of many potential mergers. The question of who will run the show cannot be ignored in any merger negotiation if the considerations are to be fruitful.

All this is not to say that Tirello is wrong in predicting that competitive forces may lead to widespread consolidations. It may happen. But if it does, it would seem to us to be more likely after utilities have taken greater advantage of the benefits of existing pooling arrangements, closer coordination and cooperation in planning, construction and operation, where each CEO remains in charge of his own corporate destiny.

What we're looking for is rarer than a double-headed four-leaf clover

So what's so rare? I'll tell you. It's an engineer with several years of transmission or distribution experience, the ability to communicate clearly and succinctly and a desire to become a writer and editor. We're looking for someone with these basic qualities to join our staff, where he or she will visit utilities, architect-engineers and manufacturers, attend industry meetings and conferences and develop news and technical articles on transmission and distribution subjects. We don't expect a trained editor...we'll provide the right person with any training needed. Location is in the suburban-Chicago area.

I know there are *EL&P* readers who possess those qualifications. I just need to know who and where you are. Or if you know of someone you believe has those qualification and might be interested in a rewarding editorial career, I hope you'll let me know. You'll be the one who profits. You'll be doing a good turn for a friend, you'll be ensuring that you get more and better coverage of transmission and distribution developments, and I'll throw in the best dinner for two at the restaurant of your choice if we hire the person you recommend.

Robert A Lincicome, Editor-in-Chief

1988 demand growth may exceed 4.5%, says study

SAN DIEGO—Early indications show 1988 electric demand growth will likely meet and may exceed the 4.5-percent increase of 1987, says John Sillin, of the San Diego-based Management Analysis Co. Probability increases as manufacturing realizes significant production increases due to improved competitiveness in both U.S. domestic and overseas markets, he said.

The significant decline in constant-dollar electricity prices since 1982 will reinforce the effects of economic growth and spur higher levels of electric demand, Sillin predicted in an April report called: "Updating the High Electric Growth Scenario: 1987 in review and the outlook for 1988."

Sillin co-authored a 1983 paper that proposed an average annual growth rate scenario at 4 percent from 1983 to 1990, about twice what government and other forecasters then predicted.

"1988 will likely be the year that a definitive judgement is reached regarding the high electric growth scenario" of four percent or higher, Sillin said. Growth in 1987 moved the 1983-90 growth curve closer to Sillin's scenario.

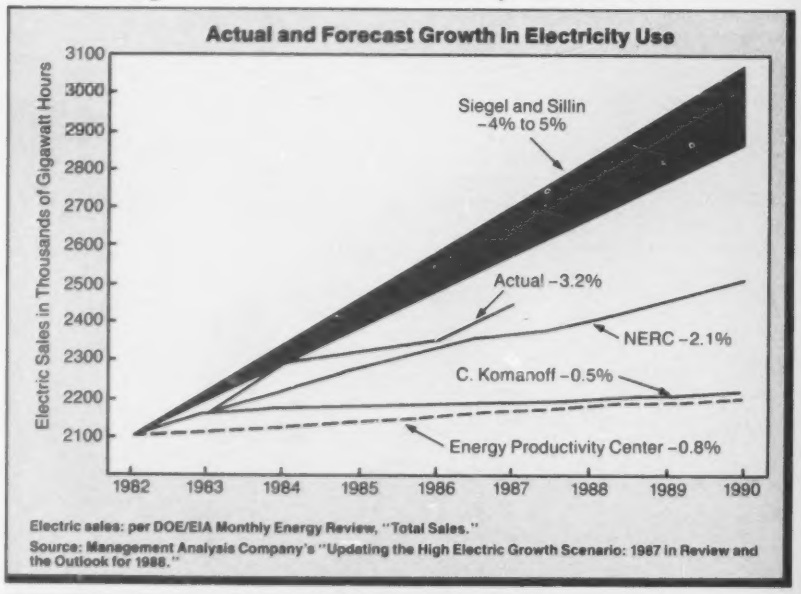
However, a slower 1988 GNP growth, combined with little or no increase in manufacturing output, will lead the figures toward the moderate 2-percent growth predicted by the Department of Energy and the National Energy Reliability Council. (See related graph.)

"But if economic growth remains modest at about 3 percent, and industrial production grows as it did in 1987, count on the high electric growth scenario occurring," Sillin said.

If electric growth remains strong in '88, electric reliability will become a greater concern in many regions, according to Sillin. New England and the Mid-Atlantic states could see more frequent voltage reductions or more severe measures than in 1987. Other regions experiencing strong demand growth such as the Southeast and Southwest may experience similar conditions.

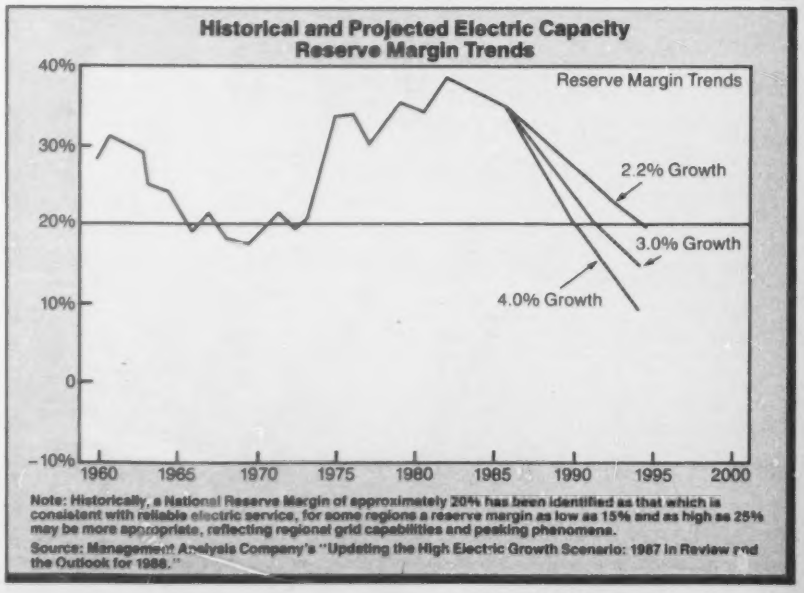
Some more key points Sillin cites for 1988 include:

- The start of a period when the large supply claims by alternative energy advocates and independent power producers will be tested.
- Strong Canadian economic growth will parallel U.S. growth, testing provincial utilities' ability to meet rapidly growing U.S.-Canadian load growth.
- Advocates of demand management will see if their programs can achieve claimed benefits of reducing or controlling load when economic and electric load-growth conditions are robust.
- Owners and operators of underperforming assets—including nuclear plants—will be under increased pressure to resolve technical or managerial problems, or transfer ownership to entities that can.
- "Finally, regulators will come under increasing pressure to realize that the preeminent issue facing electric utilities and their customers isn't controlling costs (the decline in real electric prices is clear proof that this battle has been won), but assuring that adequate and economic supplies of electric power are available to satify a growing, robust economy," he concluded.



Electric sales: per DOE/EIA Monthly Energy Review, "Total Sales."

Source: Management Analysis Company's "Updating the High Electric Growth Scenario: 1987 in Review and the Outlook for 1988."



Note: Historically, a National Reserve Margin of approximately 20% has been identified as that which is consistent with reliable electric service, for some regions a reserve margin as low as 15% and as high as 25% may be more appropriate, reflecting regional grid capabilities and peaking phenomena.

Source: Management Analysis Company's "Updating the High Electric Growth Scenario: 1987 in Review and the Outlook for 1988."

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Autodesk drops bomb onto MS-DOS

CHICAGO—First at a press conference and then in a general session at a meeting held in early May, an executive of Autodesk Inc. declared, "MS-DOS is dead...it just doesn't know it yet. OS/2 is taking its place right now."

Daniel Drake, executive vice president of Autodesk, repeated his definitive statement about the most widespread operating system for microcomputers when describing his company's newest software product for the machines, its Release 10 of AutoCAD, during a session at Expo '88. (Expo '88 was one of the concurrent conferences and shows held under the umbrella of DesCon '88.)

Although Release 10 uses MS-DOS, Drake noted that it will be the last AutoCAD product to do so—all future programs in this most-popular of the computer-aided design (CAD) applications software for desktop computers and workstations will be in the newer OS/2 operating environment. With its widespread use in the CAD world, AutoCAD's switch to OS/2-based programming is as important to designers as IBM's original announcement of OS/2 was to the world of microcomputers.

In fact, Drake's pronouncements signal the beginning of the next phase of implementing OS/2. There was speculation in the computer community that the system might not take hold. But with such an important software house now backing the new system, many of those doubts are being laid to rest.

Drake further announced that AutoCAD Release 11 will be out within the year, and it will use OS/2 exclusively. He noted, however, that the company will continue to support its older versions using MS-DOS and its equivalents.

Another side

Leonard Rand, executive vice president of Intergraph Corp., for one, stated that he was very impressed with the announcement. In an interview with *EL&P*, he stressed the industry-wide importance of Autodesk's move. And this, despite the fact that Intergraph's newest products for architecture/engineering/construction (A/E/C) applications announced at A/E/C '88, another colateral conference/show in DesCon '88, use the Unix operating system on VAX minicomputers. And despite the fact that his company was encouraging third parties to implement its software on micros with a DOS version of its MicroStation package.

Crowds enter the morning opening of the DesCon '88 Conference and Show where Autodesk declared the demise of MS-DOS.

from page 3

Flexibility is key...

As an example of varied regulatory pressure, Caldwell cited disallowances ranging from 2 to 36 percent for 24 companies owning selected nuclear power plants (see chart page 3).

Caldwell said factors that seem to affect regulatory disallowances include the size of rate increases requested, the relative cost of power within the state, and the level of public opposition to the plant and the increase.

Surprisingly, no correlation appeared between the cost of the plant and the amount of the disallowance.

Although Caldwell said cogeneration will provide 5 to 8 percent of all capacity by the year 2000, she pointed out that the majority of capacity growth in the 1990s will come from utilities. More consistent treatment by regulators would provide utilities with the needed confidence for baseload construction.

More and more, competition emphasizes pricing and marketing, she said. Many utilities have responded to customers' needs so they can ward off power purchases from outside the system or self-generation by customers, but more effort by utilities are needed.

Unbundling utility resources may work for a few, but is not likely to be a widespread trend, Caldwell contended. Companies generally don't care to sell their control of transmission capability and still feel a strong obligation to serve on the distribution side.

Although some have undergone restructuring to facilitate diversification, 80 percent of electric utilities lack nonutility holdings in excess of 5 percent of total assets. Utilities will become more aggressive in expanding in areas with which they are familiar, such as mining, investment services, coal transportion or real estate, she said.

The 1986 leaders in diversification were Minnesota Power, with 27 percent of assets providing 65 percent of income; Montana Power, with 13 percent providing 43 percent; Black Hills Corp. with 15 percent and 40 percent; PacifiCorp at 41 percent and 38 percent; Tucson Electric, with 21 percent and 33 percent; Midwest Energy at 15 percent and 25 percent; and Potomac Electric with 18 percent and 16 percent.

Although mergers and acquisitions of neighboring utilities may enable some of them to improve their fuel mix and operate more efficiently (leading to lower electricity rates and higher returns), Caldwell doesn't see any widespread trend in this direction. (See merger story, page 3.)

Caldwell provided these views at an April Duff & Phelps Investment Conference.

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Inquire R.S. 3

1987 rough for Top 100 utilities: 23rd annual report

Robert A. Lincicome
Editor-in-Chief

A number of individual investor-owned electric utilities may have enjoyed the fruits of their labors in 1987, but for the Top 100 Electric Utilities as a whole, 1987 ranks as the second worst since *EL&P* launched its series of annual financial reports 23 years ago.

Six utilities reported financial losses for the year and nearly half the Top 100 posted reductions in common stock earnings. More than 40 percent of the companies suffered lower net incomes.

The bright spot, so to speak, was kilowatthour sales performance, which increased 3.5 percent. While this is only half the historic growth rate up to the Arab oil embargo, it is a healthy rate for recent years. It must be realized, however, that the number of customers served increased by 2.0 percent and was responsible for a large portion of the kWh sales growth.

The fact that power sales were up makes the financial performance all the more disappointing. Utilities have generally finished their ambitious construction programs launched in the late 70s and early 80s. With the exception of a handful of utilities hard hit by unrecoverable costs and high expenses associated with incomplete or recently completed nuclear plants, the Top 100 companies have returned to an operational, non-expansionary mode. Company efforts in 1987 were directed toward catching up with maintenance and housekeeping functions that had been postponed in previous expansionary years. Considerable attention was focused on improving productivity by increasing work output with fewer people. Many utility executives said that they were addressing the needs of shareholders. And considerable effort was devoted to improving the quality of earnings, even where earnings were reduced from 1986.

Obviously, what was done and what was said weren't enough. Commission orders to reduce rates, write-offs of nonrecoverable investment in nuclear and other plant facilities, unusual and nonrecurring expenses, required changes in accounting procedures and reductions in allowable rates of return combined to produce a 7.4-percent decrease in net income from 1986. Moreover, the 7.4-percent decline in net income included the positive effect of non-utility operations of holding companies. Net incomes from utility-only operations fell 9.2 percent.

Following is a discussion of the performances of the Top 100 Electric Utilities in various classifications of activity. Information was derived from returns to *EL&P*'s annual survey.

Holding companies and companies operating like holding companies, although not qualifying in a legal sense, are indicated by an * in the tables following.

It should be remembered that rates of growth can be misleading. Utilities recovering from a poor year often produce unusually high growth rates that may make their performance appear substantially better than other utilities producing healthy, but unspectacular, growth rates based on previous years of strong consistent growth.

Customer base grew

Total electric customers served by the Top 100 Electric Utilities increased by 2 percent in 1987, to 79.3 million. At the same time, the number of gas customers served by the Top 100 declined 1.9 percent, to 18 million.

Utilicorp United, the holding company formed by Missouri Public Service, posted the highest individual customer growth through its aggressive program of acquisition. Utilicorp United increased its customer base by 60.6 percent in 1987.

Largest normal customer growth occurred in three areas of the country. The first two—Florida and the Southwest (Nevada, southern California and Arizona) were expected. Surprisingly, rapid customer growth also took place in northern New England...specifically, New Hampshire and Vermont.

kWh sales better

With customer growth a solid 2 percent, largely reflecting the increase in the number of residential customers, and with industrial activity remaining in an upward mode, sales could be expected to increase in 1987, and they did.

Total kilowatthour sales by the Top 100 increased at what has come to be considered a healthy 3.5 percent. Total electric sales in 1987 were 2.1-trillion kWh, as compared with sales of just over 2 trillion in 1986.

Compared to sales of 1982, 1.8-trillion kWh, growth in 1987 was solidly ahead of the average annual rate of change in kWh sold over the previous five years. Average annual growth in kWh sales from 1982 through 1986 was 2.2 percent.

In 1987, residential and commercial sales both increased in excess of 4.0 percent, while industrial sales rebounded to a 3.8-percent growth rate after being essentially flat or down over the past several years.

Eighty-four companies reported increases in kWh sales, up from 62 companies in this catagory a year ago. In addition, 18 reported increases greater than the historic industry growth rate of 7.0 percent that applied until the Arab oil embargo.

The largest kWh sales increase, 38.6 percent, was posted by Utilicorp United, on the strength of its acquisitions of small utilities. Among those whose growth was based on operations, not acquisition, Minnesota Power (18.6 percent), Midwest Energy (18.4 percent), and Green Mountain Power (18.4 percent) were leaders.

The median kWh sales growth rate in 1987 was 4 percent, compared to the overall average rate of growth of 3.5 percent, and was well above the 1986 median kWh sales growth rate of 1.9 percent.

The 10 largest sellers of electricity were the same in 1987 as in 1986, but there was one switch in ranking.

Continued on page 14

EARNINGS TABLE

Company	Rank	% Change From 1986	1987 Earnings Per Share, $	1986 Earnings Per Share, $
Public Service of Colorado	1	2246.15	3.05	0.13
Kansas Gas & Electric	2	1571.43	2.34	0.14
Portland General*	3	620.59	2.45	0.34
Public Service of Indiana	4	534.04	4.08	-0.94
Washington Water Power	5	244.78	2.31	0.67
CMS Energy*	6	190.54	2.15	0.74
Philadelphia Electric	7	130.69	2.33	1.01
Utah Power & Light	8	61.49	2.39	1.48
Atlantic Energy*	9	34.33	4.03	3.00
Public Service Enterprise Group*	10	34.21	2.55	1.90
Detroit Edison	11	25.97	3.25	2.58
Northeast Utilities*	12	25.60	2.11	1.68
TNP Enterprises* (Tex-NM Power)	13	25.52	2.41	1.92
Eastern Utilities Associates*	14	22.70	3.46	2.82
General Public Utilities*	15	22.62	4.12	3.36
Puget Sound Power & Light	16	22.41	2.13	1.74
Kentucky Utilities	17	20.28	1.72	1.43
Nevada Power	18	17.54	2.01	1.71
IE Industries*	19	16.43	2.48	2.13
Central Maine Power	20	16.23	1.79	1.54
Sierra Pacific Power	21	13.41	2.03	1.79
TECO Energy*	22	12.72	1.95	1.73
Pinnacle West Capital*	23	11.84	3.40	3.04
Iowa-Illinois Gas & Electric	24	11.51	4.36	3.91
Baltimore Gas & Electric	25	10.16	3.47	3.15
Central Louisiana Electric	26	9.32	3.52	3.22
Dominion Resources*	27	9.13	4.54	4.16
Duke Power	28	8.91	4.40	4.04
Wisconsin Energy*	29	7.59	2.55	2.37
Southern Indiana Gas & Electric	30	7.55	3.42	3.18
Kansas City Power & Light	31	7.50	3.01	2.80
Green Mountain Power	32	7.35	2.63	2.45
Savannah Electric & Power	33	7.33	2.05	1.91
Pennsylvania Power & Light	34	7.10	3.32	3.10
FPL Group* (FP&L)	35	6.90	3.10	2.90
Tucson Electric Power	36	6.45	4.95	4.65
SCANA Corporation* (SCE&G)	37	5.61	3.20	3.03
Central & South West*	38	4.53	3.92	3.75
Pacificorp	39	4.35	3.60	3.45
Wisconsin Public Service	40	3.94	2.11	2.03
Consolidated Edison	41	3.76	4.42	4.26
Oklahoma Gas & Electric	42	3.64	2.85	2.75
Southern California Edison	43	3.35	3.39	3.28
Empire District Electric	44	3.15	2.95	2.86
Louisville Gas & Electric	45	2.45	3.34	3.26
Potomac Electric Power	46	2.43	2.11	2.06
Texas Utilities*	47	2.25	4.55	4.45
KPL Gas Service	48	1.65	2.46	2.42
Duquesne Light	49	1.12	1.81	1.79
Madison Gas & Electric	50	1.05	2.90	2.87
Commonwealth Edison	51	0.85	4.73	4.69
Florida Progress* (FPC)	52	0.81	3.74	3.71
Orange & Rockland Utilities	53	0.69	2.93	2.91
Allegheny Power System*	54	0.50	4.05	4.03
United Illuminating	55	0.34	5.99	5.97
American Electric Power*	56	-0.76	2.60	2.62
Union Electric	57	-1.69	2.91	2.96
Houston Industries*	58	-1.84	3.74	3.81
Northern States Power	59	-2.59	3.01	3.09
Utilicorp United	60	-2.79	1.74	1.79
Ohio Edison	61	-2.83	2.40	2.47
Wisconsin Power & Light	62	-3.04	4.15	4.28
Carolina Power & Light	63	-3.28	3.83	3.96
Gulf States Utilities	64	-3.51	1.65	1.71
Northern Indiana Public Service	65	-3.64	0.53	0.55
Central Illinois Public Service	66	-4.08	1.88	1.96
San Diego Gas & Electric	67	-4.09	3.28	3.42
New England Electric*	68	-4.69	3.05	3.20
Midwest Energy*	69	-4.97	1.53	1.61
Illinois Power	70	-5.78	3.75	3.98
Iowa Resources*	71	-6.60	1.84	1.97
Centerior Energy*	72	-7.24	2.82	3.04
Commonwealth Energy System*	73	-8.44	4.12	4.50
Otter Tail Power	74	-10.08	3.21	3.57
Hawaiian Electric*	75	-14.40	2.20	2.57
DPL*	76	-14.75	2.60	3.05
Minnesota Power	77	-15.52	2.34	2.77
Boston Edison	78	-16.54	2.27	2.72
Delmarva Power & Light	79	-17.53	1.60	1.94
Idaho Power	80	-18.50	1.63	2.00
Long Island Lighting	81	-18.78	1.73	2.13
Cilcorp*	82	-19.23	2.52	3.12
Southwestern Public Service	83	-20.73	2.18	2.75
Middle South Utilities*	84	-21.62	1.74	2.22
IPALCO Enterprises*	85	-27.22	2.38	3.27
Cincinnati Gas & Electric	86	-28.40	2.42	3.38
Entech	87	-30.96	2.52	3.65
Public Service of New Mexico	88	-39.21	2.00	3.29
Southern Company*	89	-39.43	1.92	3.17
Pacific Gas & Electric	90	-41.15	1.53	2.60
Iowa Southern*	91	-44.32	1.52	2.73
Interstate Power	92	-59.02	0.84	2.05
El Paso Electric	93	-59.05	0.95	2.32
Public Service of New Hampshire	94	-119.88	-14.16	-6.44
Central Vermont Public Service	95	-171.51	-2.56	3.58
New York State Electric & Gas	96	-189.64	-3.46	3.86
Niagara Mohawk Power	97	-276.38	-4.78	2.71
Rochester Gas & Electric	98	-278.68	-5.95	3.33
Central Hudson Gas & Electric	99	-260.85	-8.12	4.49
Centel*	100	NA	NA	NA

SALES DATA

Company	Rank	1987 Total Sales (KWH) % Increase	Average Annual Growth 1982 - 1986	1987 Sales (KWH) By Type of Customer (% of Sales) Resid.	Comm.	Indus.	Other	Average Annual Residential Use 1987	1986	Ratio of Long-Term Debt to Net Plant 1987	1986
Utilicorp United	1	38.59	3.76	39.40	26.03	17.82	16.76	7,499	8,861	41.99	45.72
Minnesota Power	2	18.63	1.15	8.97	3.75	63.93	18.34	8,004	8,264	54.19	52.17
Midwest Energy*	3	18.39	-0.55	30.83	24.04	24.49	20.65	7,374	7,089	43.25	43.87
Green Mountain Power	4	18.37	5.29	25.95	24.85	20.93	28.26	8,802	8,872	38.99	41.53
Empire District Electric	5	17.22	4.00	27.56	19.86	17.76	34.83	10,071	9,758	33.29	36.12
Allegheny Power System*	6	15.47	-0.51	21.61	12.55	32.72	33.12	9,560	9,285	42.43	42.96
El Paso Electric	7	13.10	4.60	23.23	25.91	12.51	38.35	6,132	6,012	63.51	59.94
Kentucky Utilities	8	11.28	2.51	29.66	37.22	0.00	33.12	11,517	11,120	35.66	35.39
Nevada Power	9	10.16	3.32	41.63	3.98	48.05	6.33	NA	12,933	50.73	48.51
DPL*	10	9.08	3.14	31.68	19.85	27.91	20.56	10,232	9,994	57.67	63.35
Central Vermont Public Service	11	9.03	3.50	30.29	26.00	13.15	30.57	8,049	8,035	51.52	56.73
Pacific Gas & Electric	12	7.63	0.46	32.95	33.99	24.13	8.93	6,489	6,343	53.28	50.53
Atlantic Energy*	13	7.56	3.32	43.35	36.96	18.87	0.83	8,281	7,982	40.29	42.96
Sierra Pacific Power	14	7.51	0.78	30.90	39.25	26.25	3.59	7,260	7,186	78.37	79.05
Wisconsin Public Service	15	7.44	2.83	24.32	23.69	31.07	20.92	7,294	7,340	38.82	35.95
New York State Electric & Gas	16	7.29	8.61	29.78	17.50	18.32	34.40	7,569	7,538	62.15	53.51
Duke Power	17	7.00	3.56	25.61	20.12	38.57	15.71	12,830	12,413	39.61	41.46
Iowa Southern*	18	7.00	3.27	36.32	17.25	38.16	8.28	8,241	8,007	37.75	37.47
Northern States Power	19	6.80	2.13	26.49	14.76	44.85	13.88	7,603	7,540	32.32	35.33
San Diego Gas & Electric	20	6.58	2.27	37.13	35.88	21.82	5.16	5,341	5,256	41.30	41.68
Pinnacle West Capital*	21	6.54	1.41	34.95	36.94	17.97	10.14	10,684	10,176	44.81	39.32
Iowa-Illinois Gas & Electric	22	6.47	1.40	26.62	27.22	43.32	2.84	6,861	6,454	40.19	33.78
Duquesne Light	23	6.45	1.16	22.76	36.38	21.67	19.19	6,019	5,821	54.59	46.26
Southern Company*	24	6.43	5.50	22.49	18.90	31.64	26.98	11,145	10,514	45.34	45.29
Baltimore Gas & Electric	25	6.31	4.56	37.75	15.74	46.51	0.00	9,837	9,255	41.16	41.26
Wisconsin Energy*	26	6.24	1.94	29.15	26.39	33.13	11.33	7,603	7,481	44.38	53.12
Cincinnati Gas & Electric	27	6.19	2.72	34.93	25.19	29.78	10.11	10,699	10,321	46.88	49.16
Northern Indiana Public Service	28	5.94	-1.38	19.58	4.28	73.75	2.38	7,083	6,708	43.59	48.25
Pennsylvania Power & Light	29	5.85	7.29	28.43	23.15	26.20	22.21	9,565	9,344	38.82	42.77
Ohio Edison	30	5.48	3.45	24.57	19.46	30.52	25.45	8,140	7,924	89.57	82.04
Dominion Resources*	31	5.47	4.84	35.53	27.71	16.24	20.52	12,667	12,277	48.37	46.35
Kansas City Power & Light	32	5.41	3.10	31.04	43.58	23.56	1.82	8,917	8,563	43.25	45.30
Philadelphia Electric	33	5.39	2.12	30.91	14.21	51.69	3.19	7,427	7,097	49.91	46.99
Central Maine Power	34	5.24	4.71	34.17	23.57	40.50	1.76	7,196	7,145	50.36	50.27
Pacificorp	35	5.15	0.07	25.00	21.37	33.48	20.15	11,444	11,448	33.51	35.56
Carolina Power & Light	36	4.96	2.68	26.50	18.56	31.63	23.30	12,557	12,170	39.18	39.66
Consolidated Edison	37	4.78	0.27	27.24	66.75	4.43	1.58	3,709	3,511	37.60	37.43
Kansas Gas & Electric	38	4.63	0.93	26.19	21.22	36.11	16.48	9,314	9,202	53.17	54.31
SCANA Corporation* (SCE&G)	39	4.48	3.87	32.44	26.36	32.18	9.02	12,988	12,821	34.00	29.63
Long Island Lighting	40	4.42	2.40	43.20	0.00	52.37	4.43	7,569	7,260	44.59	46.49
Rochester Gas & Electric	41	4.40	1.04	28.16	24.77	25.47	21.60	6,940	6,759	57.32	44.72
Potomac Electric Power	42	4.36	4.26	26.25	41.96	21.95	9.84	10,526	10,022	41.26	40.47
United Illuminating	43	4.32	1.96	34.74	39.93	24.12	1.21	6,562	6,356	49.76	45.85
Public Service Enterprise Group*	44	4.30	2.85	26.78	43.16	28.72	1.34	5,939	5,650	36.64	37.87
FPL Group* (FP&L)	45	4.27	3.06	50.06	39.53	7.00	3.41	11,236	11,243	36.79	38.65
Cilcorp*	46	4.11	1.15	31.65	23.57	43.30	1.47	8,941	8,593	36.36	37.89
Northeast Utilities*	47	4.11	2.95	37.71	34.83	23.28	4.19	8,061	7,746	48.38	47.09
Savannah Electric & Power	48	4.06	1.66	42.25	30.60	23.31	3.84	11,481	11,514	40.58	46.53
Otter Tail Power	49	4.03	-3.24	27.78	15.24	36.26	20.72	9,280	9,966	30.17	31.31
Florida Progress* (FPC)	50	4.03	3.32	42.81	24.96	13.90	18.33	11,356	11,255	31.98	37.16
General Public Utilities*	51	4.02	2.18	34.41	28.41	33.57	3.62	7,938	7,682	35.59	38.68
Centerior Energy*	52	4.01	1.66	25.28	24.11	45.50	5.12	7,448	7,346	52.93	115.91
Wisconsin Power & Light	53	3.94	5.01	25.97	15.55	30.56	27.92	8,236	8,105	39.31	41.21
Delmarva Power & Light	54	3.90	5.40	28.56	26.52	27.30	17.62	9,152	8,605	48.76	50.82
Niagara Mohawk Power	55	3.89	1.05	27.06	30.04	30.61	12.30	7,382	7,249	51.61	43.30
Detroit Edison	56	3.82	3.78	28.19	19.94	46.15	5.72	6,635	6,350	48.47	40.47
Public Service of Indiana	57	3.68	0.88	28.41	23.30	33.42	14.87	10,966	10,777	40.27	62.72
Hawaiian Electric*	58	3.68	2.17	28.03	25.67	45.51	0.79	7,114	6,911	34.92	36.87
Commonwealth Edison	59	3.64	1.99	28.18	29.82	30.67	11.33	6,756	6,525	35.70	38.08
TECO Energy*	60	3.54	2.50	40.31	30.17	22.22	7.29	12,646	12,590	34.77	35.38
Houston Industries*	61	3.53	-0.89	26.29	20.01	49.08	4.61	12,812	12,675	34.42	37.87
CMS Energy*	62	3.43	2.56	31.54	26.62	37.99	3.85	7,029	6,852	60.20	89.69
Texas Utilities*	63	3.35	4.93	33.07	28.70	27.54	10.69	13,147	12,749	41.28	38.79
Madison Gas & Electric	64	3.08	0.84	28.63	55.48	5.44	10.45	5,400	6,222	44.18	48.66
Southern Indiana Gas & Electric	65	3.01	4.77	24.48	19.93	36.30	17.29	11,518	11,341	38.57	27.71
Public Service of New Mexico	66	2.93	0.74	20.91	28.92	11.24	38.94	6,015	5,822	47.07	47.37
Louisville Gas & Electric	67	2.72	2.85	32.90	27.03	29.12	10.95	10,282	9,898	37.42	39.84
Orange & Rockland Utilities	68	2.68	2.90	33.71	22.64	31.11	12.54	6,703	6,385	42.71	41.71
Union Electric	69	2.66	3.45	33.04	33.03	28.33	5.60	10,390	10,227	45.51	46.91
Tucson Electric Power	70	2.66	10.17	29.54	18.31	35.96	16.20	8,404	7,965	63.55	60.10
IPALCO Enterprises*	71	2.65	3.25	32.20	22.37	44.62	0.81	10,525	10,347	39.45	40.05
Oklahoma Gas & Electric	72	2.47	-2.41	32.79	22.60	28.30	16.31	10,857	10,591	36.31	38.04
Public Service of Colorado	73	2.39	3.23	28.60	47.43	19.02	4.96	6,258	6,152	38.21	34.64
Interstate Power	74	2.38	-0.90	23.17	18.77	51.65	6.41	7,447	7,229	44.68	44.37
Utah Power & Light	75	2.10	0.51	19.82	17.77	41.79	20.63	7,730	7,907	49.03	44.52
Southern California Edison	76	2.09	1.64	30.15	33.18	32.76	3.91	6,117	5,999	39.89	42.06
IE Industries*	77	1.70	1.19	32.29	25.87	33.62	8.21	8,169	8,143	29.01	35.77
Eastern Utilities Associates*	78	1.65	3.06	27.98	27.92	18.18	25.92	5,996	5,792	52.49	51.98
KPL Gas Service	79	1.35	0.32	23.21	28.39	19.58	28.83	8,320	8,108	32.43	32.31
Commonwealth Energy System*	80	1.21	2.34	25.55	26.51	7.59	40.34	5,915	5,948	38.73	35.30
New England Electric*	81	0.85	3.89	36.66	33.97	24.64	4.73	6,776	6,500	48.95	51.99
Illinois Power	82	0.66	1.80	27.65	18.66	47.75	5.93	8,748	8,694	43.44	43.61
Boston Edison	83	0.49	0.61	25.59	54.18	14.87	5.36	5,903	5,735	39.04	38.60
Washington Water Power	84	0.43	-0.71	32.15	22.44	12.88	32.53	13,062	13,674	56.04	57.21
Central Louisiana Electric	85	-0.14	1.07	39.50	18.39	34.85	7.26	11,873	11,964	40.72	42.17
Central & South West*	86	-0.17	-0.28	29.58	24.77	31.00	14.65	10,464	10,328	34.69	34.95
Middle South Utilities*	87	-0.30	2.47	29.59	20.29	35.77	14.35	11,693	11,789	52.89	55.37
Public Service of New Hampshire	88	-1.07	3.16	32.41	14.80	31.99	20.80	7,181	7,119	56.77	55.83
Central Hudson Gas & Electric	89	-1.37	-0.19	28.53	25.77	34.18	11.52	6,738	6,491	84.45	114.53
Iowa Resources*	90	-1.54	3.73	36.38	25.96	33.38	4.28	8,560	8,463	40.97	44.54
Gulf States Utilities	91	-1.88	-1.27	23.32	18.45	44.37	13.86	12,818	12,731	52.09	51.89
Centel*	92	-2.26	0.46	29.06	30.40	20.46	20.07	6,684	6,492	0.00	0.00
Puget Sound Power & Light	93	-2.77	0.04	47.50	30.45	18.91	3.14	12,758	13,396	57.53	58.60
Central Illinois Public Service	94	-2.90	-2.52	32.48	13.20	46.66	7.66	9,001	8,806	40.60	40.23
Southwestern Public Service	95	-3.97	6.00	14.04	15.37	38.43	32.17	7,757	7,672	39.83	39.52
Portland General*	96	-6.44	3.59	33.76	28.40	19.32	18.52	11,751	11,987	53.73	57.88
American Electric Power*	97	-7.79	1.74	24.94	17.15	37.34	20.57	10,526	10,049	50.47	49.95
TNP Enterprises* (Tex-NM Power)	98	-8.38	4.27	30.15	21.26	46.30	2.30	10,668	10,465	35.47	36.06
Entech	99	-10.05	5.15	19.82	20.59	30.54	29.04	8,377	8,566	48.07	49.71
Idaho Power	100	-12.50	-0.69	26.45	15.07	30.12	28.36	13,785	14,541	40.13	41.05

TABLE I
THE TOP 10 IN KWH SALES

Rank '87	Rank '86	Company	KWH Sales (millions)	'87% Change
1	1	Souhern Company	131,343	6.43
2	2	American Electric Power	98,206	-7.79
3	3	Texas Utilities	77,773	3.35
4	4	Commonwealth Edison	67,490	3.64
5	6	Pacific Gas & Electric	66,558	7.63
6	5	Southern California Edison	65,539	2.09
7	7	Duke Power	64,751	7.00
8	8	Middle South Utilities	57,631	-0.30
9	9	FPL Group	56,592	4.27
10	10	Houston Industries	55,911	3.83

Southern California Edison, fifth in 1986, posted just a 2.1-percent increase and slipped one position. SoCalEd was replaced by Pacific Gas & Electric, sixth in 1986, which enjoyed a healthy 7.6-percent increase in kWh sales. All others among the 10 largest kWh sellers held the same positions as a year earlier.

The Southern Company, perennial sales leader, enjoyed a strong sales year in 1987, increasing its kWh sales by 6.4 percent. Usual runner-up, American Electric Power, suffered a 7.8-percent decline in kWh sales despite increased sales to residential, commercial and industrial customers. A large drop in sales to "other" customers contributed to AEP's ranking of 97th among the Top 100 Electric Utilities.

Average annual residential use also increased in 1987, hitting an all-time high of 8928 kWh, 1.2 percent above the previous record, which was established in 1984, when average residential use hit 8823 kWh. In 1986, according to revised figures submitted by the Top 100 Electric Utilities, average residential use was 8784. A year ago, the Top 100 utilities submitted figures that showed average residential use as 8634 kWh.

Interestingly, 1987 average residential kWh use was just 2.6 percent higher than a decade earlier, in 1978, reflecting an era of essentially flat industry growth.

As in the past, the companies posting the largest average residential kWh-use gains tended to be in the low-cost-of-electricity Pacific Northwest and in hot, humid areas of the South and Southwest. The leaders were: 1. Idaho Power, 13,785 kWh; 2. Nevada Power, 13,468 kWh; 3. Texas Utilities, 13,147 kWh; 4. Washington Water Power, 13,062 kWh; 5. SCANA Corp., 12,988 kWh; 6. Duke Power, 12,830 kWh; 7. Gulf States Utilities, 12,818 kWh; 8. Houston Lighting & Power, 12,812; 9. Puget Sound Power & Light, 12,750 kWh; and 10. Dominion Resources, 12,667 kWh.

At the opposite end of the spectrum were companies located in the high cost-of-service areas of New England and the metropolitan New York-Newark region. Companies posting the lowest average residential use included: 96. Eastern Utilities Associates, 5,939 kWh; 97. Public Service Enterprises Group, 5,915 kWh; 98. Commonwealth Energy System, 5,903 kWh; 99. Boston Edison, 5341 kWh; and 100. Consolidated Edison, 3,709 kWh.

Slight revenue gain

Total revenues for the Top 100 Electric Utilities increased slightly in 1987, to $150 billion, a gain of just 0.5 percent from 1986's total revenues of $149.2 billion. While the 1987 performance was a bit upward, total revenues still were $100 million below those posted in 1985. Total revenues included funds from all sources for each of the companies reporting, including

TABLE II
THE TOP 10 TOTAL REVENUES

Rank '87	Rank '86	Company	'87 $ Revenues (millions)	'87% Change
1	1	Pacific Gas & Electric	7,186	-8.07
2	2	Southern Company*	7,010	2.39
3	3	Commonwealth Edison	5,674	3.56
4	4	Southern California Edison	5,494	3.41
5	5	Consolidat[illegible]	5,094	-1.99
6	6	[illegible]ican Electric Power*	4,788	-3.25
[illegible]	[illegible]	FPL Group*	4,439	8.50
[illegible]	[illegible]	[illegible] Service	4,211	-6.39
9	[illegible]	[illegible]ies*	4,083	3.84
10	12	[illegible]ower	3,706	8.96

those of both regulated and non-regulated subsidiaries of utility holding companies.

Several factors led to the lack of revenue growth. Certainly, fewer rate increases were granted in 1987 and they tended to be smaller in size. Also, a number of general rate reductions were ordered by state commissions and some rate redesigns were initiated. Reduced fuel-cost pass-throughs also contibuted to lower revenues. Rate revisions to reflect the reduction in federal corporate income taxes resulting from the Tax Reform Act of 1986 also were a major factor in reductions in revenues.

Overall, only slightly more than half the Top 100 Electric Utilities—just 52 companies—reported revenue increases for 1987. Still, this was a bit better than for 1986, when only 41 companies reported revenue gains. Median revenue growth was 0.5 percent for 1987, the same as the gain in total revenues. A year ago, however, total revenues were reported to have fallen by 1.3 percent and the median revenue change was a -0.6 percent.

Holding companies reported total revenues of $52.2-billion, while operating utilities only reported revenues of $97.8-billion. In 1986, holding companies reported total revenues of $52.0-billion while operating utilities only enjoyed revenues of $97.3-billion. Total revenues from utility operations for utility-only and holding company-owned utility subsidiaries totalled $148.0-billion in 1987, up just 0.4 percent from 1986.

The relative contribution of non-utility operations was clear in this year's survey. Non-utility operations represented just 1.3 percent of total Top 100 revenues.

The largest revenue gain, 17.6 percent, was recorded by Central Maine Public Service, largely on the strength of higher rates granted in 1986 and improved kWh sales. Central Maine posted revenues of $598.2-million. San Diego Gas & Electric ranked second in revenue growth in 1987, up 16.5 percent, on the strength of both higher rates and better kWh sales. The third-ranked revenue gainer was Allegheny Power Systems, which enjoyed substantially greater kWh sales that more than overcame the effect of mandated rate reductions during the year. APS increased its revenues by 16.3 percent in 1987.

Utilities suffering the greatest reductions in revenues included Iowa Southern Inc., ranked 100th, which suffered a mandated $33-million refund of electric revenues and lower rates, plus reduced gas sales as a result of temperate winter weather. Also, Iowa Illinois Gas & Electric, 99th, which reported revenues that fell 11.1 percent because of markedly reduced gas sales and changes in billing and accounting procedures. Northern Indiana Public Ser-

FINANCIAL STATISTICS

Company	Net Income Rank	Net Income % Gain	Revenue Rank	Revenue % Gain	Sales (KWH) Rank	Sales (KWH) % Gain	Int. Cov. Ratio 1987	Int. Cov. Ratio 1986	Earnings Per Share $ 1987	Price/Share 1987 (Dollars) High	Price/Share 1987 (Dollars) Low	% Change Long-Term Debt '86-'87
Public Service of Colorado	1	2301.79	53	-0.03	73	2.39	1.80	0.06	3.05	22.875	17.250	8.83
Kansas Gas & Electric	2	1575.09	30	3.18	38	4.63	0.94	0.06	2.34	25.625	16.000	-7.02
Portland General*	3	614.03	49	0.52	96	-6.44	1.26	0.20	2.45	31.500	20.625	-9.27
Washington Water Power	4	246.18	38	2.22	84	0.43	1.00	0.28	2.31	30.250	22.250	-2.00
CMS Energy*	5	182.54	96	-9.91	62	3.43	0.49	0.16	2.15	20.000	10.750	-2.59
Philadelphia Electric	6	141.54	46	1.26	33	5.39	1.14	0.50	2.33	26.000	16.750	13.62
Utah Power & Light	7	66.10	55	-0.21	75	2.10	1.09	0.76	2.39	30.875	20.750	10.10
Public Service Enterprise Group*	8	37.52	91	-6.39	44	4.30	1.60	1.20	2.55	30.580	20.000	-0.73
Atlantic Energy*	9	34.25	6	11.19	13	7.56	1.54	1.19	4.03	41.375	28.750	-1.15
Eastern Utilities Associates*	10	34.03	17	6.93	78	1.65	0.60	0.77	3.46	40.500	24.000	13.08
TNP Enterprises* (Tex-NM Power)	11	29.04	44	1.28	98	-8.38	1.61	1.12	2.41	23.750	17.250	4.41
Puget Sound Power & Light	12	26.22	39	2.04	93	-2.77	1.26	1.20	2.13	22.500	17.750	-2.46
Detroit Edison	13	26.02	57	-0.44	56	3.82	1.07	0.85	3.25	19.000	12.500	28.36
Northeast Utilities*	14	25.95	36	2.40	47	4.11	1.36	1.08	2.11	28.000	18.000	5.63
General Public Utilities*	15	22.83	84	-4.08	51	4.02	1.68	1.31	4.12	29.750	21.750	-3.35
Pinnacle West Capital*	16	21.50	23	5.08	21	6.54	1.82	1.25	3.40	32.375	26.625	18.33
Nevada Power	17	20.77	67	-2.24	9	10.16	1.76	1.35	2.01	22.000	16.375	8.49
Green Mountain Power	18	19.95	4	14.76	4	18.37	2.17	1.70	2.63	29.250	20.500	-1.78
IE Industries*	19	19.41	81	-3.84	77	1.70	1.54	1.24	2.48	27.625	20.875	-15.86
Tucson Electric Power	20	16.51	7	10.92	70	2.66	2.95	4.51	4.95	64.250	49.250	19.55
Kentucky Utilities	21	14.73	51	0.46	8	11.28	2.01	1.74	1.72	22.250	15.000	-0.02
TECO Energy*	22	13.39	15	7.59	60	3.54	2.39	1.95	1.95	26.375	20.250	-0.04
Dominion Resources*	23	11.76	22	5.60	31	5.47	1.35	1.26	4.54	49.875	36.625	8.56
Baltimore Gas & Electric	24	10.47	62	-1.35	25	6.31	2.31	2.06	3.47	37.875	19.000	3.23
Iowa-Illinois Gas & Electric	25	10.41	99	-11.13	22	6.47	1.94	1.63	4.38	47.000	34.500	17.49
FPL Group* (FP&L)	26	10.25	11	8.50	45	4.27	1.48	1.41	3.10	34.875	24.375	-1.67
Central Louisiana Electric	27	9.89	30	2.45	85	-0.14	1.26	1.10	3.52	37.000	28.750	-1.14
Duke Power	28	9.01	9	8.96	17	7.00	1.93	1.67	4.40	51.750	39.375	-0.45
Texas Utilities*	29	8.47	27	3.84	63	3.35	1.80	1.82	4.55	36.625	25.500	20.02
Savannah Electric & Power	30	8.34	52	0.29	48	4.06	1.28	1.11	2.05	22.000	14.625	-9.40
Pacificorp	31	7.76	25	4.63	35	5.15	1.25	1.06	3.60	39.000	26.750	-4.03
Kansas City Power & Light	32	7.65	20	6.01	32	5.41	0.98	0.86	3.01	31.750	21.000	-5.43
Wisconsin Energy*	33	7.48	77	-3.30	26	6.24	2.15	2.50	2.55	28.875	21.000	-5.19
Pennsylvania Power & Light	34	7.35	87	-4.58	29	5.85	0.82	0.75	3.32	41.375	28.625	-8.78
Utilicorp United	35	6.62	54	-0.16	1	38.59	0.83	0.94	1.74	22.350	13.380	19.16
Sierra Pacific Power	36	6.57	80	-3.53	14	7.51	1.27	1.26	2.03	27.125	18.000	4.17
Southern Indiana Gas & Electric	37	5.74	34	2.53	65	3.01	1.75	1.44	3.42	41.250	31.000	39.27
SCANA Corporation* (SCE&G)	38	5.49	45	1.26	39	4.48	1.99	1.61	3.20	40.000	26.500	18.34
Empire District Electric	39	5.33	5	13.33	5	17.22	2.16	1.96	2.95	34.000	27.375	0.00
Commonwealth Edison	40	4.79	28	3.56	59	3.64	1.44	1.34	4.73	38.000	25.250	-1.29
Central & South West*	41	4.59	88	-4.64	86	-0.17	2.05	2.12	3.92	40.500	27.000	5.07
Louisville Gas & Electric	42	4.54	86	-4.45	67	2.72	1.46	1.35	3.34	40.750	30.125	-0.95
Wisconsin Public Service	43	3.97	65	-1.99	15	7.44	2.37	2.24	2.11	26.875	18.875	11.48
Florida Progress* (FPC)	44	3.64	31	3.09	50	4.03	1.90	1.57	3.74	43.875	29.375	-12.89
Southern California Edison	45	3.45	29	3.41	76	2.09	1.78	1.57	3.39	37.000	27.625	-2.74
Central Maine Power	46	2.73	1	17.56	34	5.24	1.04	0.92	1.79	20.500	12.500	6.13
Oklahoma Gas & Electric	47	2.56	70	-2.42	72	2.47	1.65	1.77	2.85	36.625	28.000	-4.45
Potomac Electric Power	48	2.55	72	-2.80	42	4.36	2.31	2.03	2.11	27.375	18.000	7.41
Houston Industries*	49	2.36	33	2.61	61	3.53	2.11	1.93	3.74	39.380	26.500	-2.42
Madison Gas & Electric	50	1.81	82	-3.90	64	3.08	1.52	1.78	2.90	37.000	29.750	-5.34
Allegheny Power System*	51	1.59	3	16.26	6	15.47	1.54	1.54	4.05	49.000	31.375	1.27
KPL Gas Service	52	1.48	71	-2.70	79	1.35	1.66	1.60	2.46	30.750	20.250	3.00
Ohio Edison	53	1.34	26	4.60	30	5.48	1.00	0.90	2.40	23.250	16.500	-4.46
Consolidated Edison	54	0.78	64	-1.99	37	4.78	2.43	2.56	4.42	52.000	37.500	3.54
United Illuminating	55	0.78	21	5.63	43	4.32	0.85	0.91	5.99	34.000	21.250	17.06
Orange & Rockland Utilities	56	0.71	89	-5.12	68	2.68	1.32	1.49	2.93	36.250	25.000	14.33
Duquesne Light	57	0.50	60	-0.92	23	6.45	0.77	0.77	1.81	14.375	10.625	4.76
Centerior Energy*	58	-0.39	43	1.45	52	4.01	0.90	0.97	2.82	24.875	15.000	-1.96
American Electric Power*	59	-0.93	75	-3.25	97	-7.79	0.92	0.89	2.60	31.625	23.125	2.60
Carolina Power & Light	60	-1.55	41	2.01	36	4.96	1.25	1.34	3.83	42.875	30.250	2.42
Union Electric	61	-1.73	14	7.70	69	2.66	1.30	1.22	2.91	31.625	19.875	-3.25
Illinois Power	62	-1.80	32	3.01	82	0.66	1.24	1.29	3.75	31.500	21.250	1.46
New England Electric*	63	-1.87	47	1.13	81	0.85	2.13	1.97	3.05	32.875	20.000	-0.71
Gulf States Utilities	64	-2.07	74	-3.10	91	-1.88	0.58	0.70	1.65	10.000	4.750	-2.53
Northern States Power	65	-2.63	58	-0.63	19	6.80	1.97	2.04	3.01	39.750	26.250	-3.37
Wisconsin Power & Light	66	-3.01	79	-3.49	53	3.94	1.89	1.84	4.15	54.750	42.500	-3.12
San Diego Gas & Electric	67	-4.04	2	16.52	20	6.58	1.78	1.70	3.28	37.875	28.250	0.89
Central Illinois Public Service	68	-4.37	90	-5.67	94	-2.90	1.61	1.76	1.88	30.000	19.500	0.02
Midwest Energy*	69	-4.94	94	-9.24	3	18.39	1.06	0.90	1.53	24.875	15.000	-1.43
Commonwealth Energy System*	70	-6.40	95	-9.61	80	1.21	2.50	2.47	4.12	45.750	29.250	22.70
Iowa Resources*	71	-6.49	42	1.80	90	-1.54	1.55	1.46	1.84	25.750	17.375	-8.07
Otter Tail Power	72	-10.07	73	-3.03	49	4.03	1.62	1.62	3.21	49.750	33.500	-4.27
Boston Edison	73	-12.22	18	6.85	83	0.49	1.24	1.47	2.27	28.000	16.750	12.86
Hawaiian Electric*	74	-12.26	16	7.12	58	3.68	1.32	1.42	2.20	34.250	22.250	0.87
DPL*	75	-14.29	69	-2.33	10	9.08	1.37	1.36	2.60	29.250	22.125	-7.52
Minnesota Power	76	-15.26	13	7.76	2	18.63	1.64	2.09	2.34	35.250	19.750	6.06
Delmarva Power & Light	77	-17.73	56	-0.33	54	3.90	1.31	1.62	1.60	23.375	16.250	-3.23
Idaho Power	78	-18.65	78	-3.49	100	-12.50	0.98	1.20	1.63	30.250	19.000	-3.18
Long Island Lighting	79	-18.81	24	4.80	40	4.42	0.51	0.84	1.73	12.375	6.500	-2.11
Cilcorp*	80	-19.20	92	-7.17	46	4.11	1.68	1.91	2.52	43.375	29.000	-4.10
Southwestern Public Service	81	-20.65	85	-4.13	95	-3.97	1.68	1.91	2.18	36.750	25.625	0.56
Middle South Utilities*	82	-21.53	59	-0.89	87	-0.30	0.46	0.56	1.74	16.250	7.750	-0.63
Cincinnati Gas & Electric	83	-26.69	76	-3.28	27	6.19	1.09	1.37	2.42	29.750	23.125	1.36
IPALCO Enterprises*	84	-27.21	12	8.06	71	2.65	1.66	1.37	2.38	28.750	19.500	-1.40
Entech	85	-28.90	50	0.50	99	-10.05	1.13	1.62	2.52	41.750	29.500	-1.06
Public Service of New Mexico	86	-37.17	61	-1.24	66	2.93	1.14	1.60	2.00	39.250	17.375	-1.19
Southern Company*	87	-37.20	37	2.39	24	6.43	0.68	1.12	1.92	29.000	17.875	6.02
Pacific Gas & Electric	88	-37.54	93	-8.07	12	7.63	0.74	1.28	1.53	27.880	15.000	9.94
Iowa Southern*	89	-44.39	100	-14.95	18	7.00	0.51	1.54	1.52	34.750	26.500	-0.40
Interstate Power	90	-58.49	97	-10.62	74	2.38	0.44	0.95	0.84	30.000	19.375	-0.21
El Paso Electric	91	-58.79	19	6.19	7	13.10	0.36	0.92	0.95	21.625	13.125	-7.18
Public Service of New Hampshire	92	-120.04	10	8.69	88	-1.07	0.00	-1.70	-14.16	9.375	2.250	0.10
Central Vermont Public Service	93	-172.49	8	9.50	11	9.03	0.00	21.89	-2.56	31.000	20.625	-6.47
New York State Electric & Gas	94	-195.69	48	0.97	16	7.29	0.00	1.25	-3.46	33.250	20.175	6.58
Niagara Mohawk Power	95	-240.05	63	-1.39	55	3.89	0.00	1.43	-4.78	19.125	11.125	3.04
Rochester Gas & Electric	96	-261.42	88	-2.29	41	4.40	0.00	1.61	-5.95	25.875	14.250	9.34
Central Hudson Gas & Electric	97	-294.93	66	-2.16	89	-1.37	0.00	1.67	-8.12	31.875	16.500	-2.13
Public Service of Indiana	98	-534.44	40	2.04	57	3.68	2.07	-0.40	4.08	17.375	11.250	-36.33
Northern Indiana Public Service	99	-591.82	98	-10.73	28	5.94	0.44	-0.09	0.53	12.500	8.000	-9.73
Centel*	100	NA	83	-4.02	92	-2.26	NA	NA	NA	NA	NA	NA

ALPHABETICAL LISTING OF COMPANY PERFORMANCE

Company	Electric Sales (KWH) (millions)	Rank	Customers Served: Electric Total	Electric % Gain	Gas Total	Gas % Gain	Revenues: Total $ (1000's)	% Electric	% Gas	Net Income After Tax $ (Thousands)
Allegheny Power System*	47,541	12	1,227,852	1.60	0	0.00	1,981,242	100.00	0.00	206,989
American Electric Power*	98,208	2	2,650,331	1.28	0	-100.00	4,787,604	97.95	0.96	502,460
Atlantic Energy*	7,014	70	421,251	3.30	0	0.00	648,173	100.00	0.00	73,765
Baltimore Gas & Electric	22,575	31	968,468	2.78	518,280	0.02	1,809,191	77.04	22.96	273,692
Boston Edison	12,460	52	621,083	1.13	0	0.00	1,181,097	100.00	0.00	97,686
CMS Energy*	27,837	25	1,410,331	0.72	1,283,351	2.57	2,800,540	58.24	40.08	183,800
Carolina Power & Light	36,274	15	908,820	2.60	0	0.00	2,081,885	100.00	0.00	308,091
Centel*	2,624	96	135,842	0.19	0	0.00	164,024	99.66	0.00	NA
Centerior Energy*	26,342	27	1,005,753	0.72	0	0.00	1,945,541	99.50	0.00	390,353
Central & South West*	45,699	13	1,522,890	0.30	0	0.00	2,436,515	96.48	3.52	371,507
Central Hudson Gas & Electric	4,886	82	241,194	1.85	55,138	3.93	429,077	87.39	12.61	(115,537)
Central Illinois Public Service	7,290	69	305,220	-0.02	156,514	0.16	590,846	82.04	17.96	64,080
Central Louisiana Electric	5,122	79	197,017	0.29	0	0.00	304,409	100.00	0.00	39,407
Central Maine Power	8,564	65	450,752	3.04	0	0.00	598,154	100.00	0.00	46,525
Central Vermont Public Service	3,000	95	130,052	2.87	0	0.00	208,935	98.35	0.00	(17,014)
Cilcorp*	4,609	84	182,768	0.27	185,305	0.92	454,523	66.03	30.40	34,240
Cincinnati Gas & Electric	17,454	39	644,855	1.98	378,690	1.80	1,357,381	74.01	25.99	110,207
Commonwealth Edison	67,490	4	3,096,999	1.21	0	0.00	5,673,782	100.00	0.00	977,651
Commonwealth Energy System*	5,997	76	320,000	1.91	211,000	1.44	612,940	61.00	37.22	38,093
Consolidated Edison	31,608	21	2,873,012	0.95	1,024,291	0.21	5,094,418	82.22	12.35	512,316
DPL*	12,665	50	438,669	1.34	271,714	0.87	941,210	76.33	22.56	107,902
Delmarva Power & Light	9,565	58	341,308	3.45	79,002	1.87	712,479	85.95	10.98	72,989
Detroit Edison	39,492	14	1,856,968	2.17	0	0.00	2,856,731	98.92	0.00	476,734
Dominion Resources*	52,378	11	1,648,700	2.04	139,193	4.36	3,251,200	94.68	1.34	430,500
Duke Power	64,751	7	1,520,709	2.54	0	0.00	3,705,784	99.52	0.00	445,934
Duquesne Light	13,466	48	565,536	0.42	0	0.00	888,004	100.00	0.00	131,528
Eastern Utilities Associates*	4,746	83	248,000	1.64	0	0.00	367,129	99.26	0.00	43,546
El Paso Electric	5,080	80	227,234	3.07	0	0.00	337,792	99.53	0.00	33,560
Empire District Electric	3,426	93	111,600	1.86	0	0.00	150,148	99.58	0.00	16,079
Entech	8,659	64	245,431	0.28	105,532	0.71	658,727	50.88	13.25	58,637
FPL Group* (FP&L)	56,592	9	2,906,829	4.13	0	0.00	4,439,232	94.64	0.00	402,873
Florida Progress* (FPC)	24,104	29	1,050,311	4.05	0	0.00	1,957,600	71.86	0.00	187,800
General Public Utilities*	36,169	16	1,782,118	2.29	0	0.00	2,673,421	99.92	0.00	259,097
Green Mountain Power	2,081	99	72,310	3.50	0	0.00	129,811	99.07	0.00	9,646
Gulf States Utilities	26,620	26	554,095	-0.18	83,003	-1.18	1,432,586	92.85	2.33	178,091
Hawaiian Electric*	7,003	71	323,536	2.77	0	0.00	566,318	99.53	0.00	37,809
Houston Industries*	55,911	10	1,306,328	0.24	0	0.00	3,628,213	82.71	0.00	434,958
IE Industries*	4,418	86	206,354	0.17	122,351	-3.62	412,778	73.52	21.84	34,076
IPALCO Enterprises*	10,595	56	366,933	2.71	0	0.00	553,749	95.80	0.00	89,335
Idaho Power	11,977	53	276,261	0.77	0	0.00	394,597	100.00	0.00	55,223
Illinois Power	15,336	44	542,836	0.41	384,091	0.23	1,219,523	74.69	25.31	251,859
Interstate Power	3,982	90	156,375	0.40	45,497	0.58	262,864	78.58	21.42	7,792
Iowa Resources*	4,924	81	242,912	1.28	0	0.00	341,519	98.94	0.00	40,941
Iowa Southern*	1,938	100	93,613	0.12	37,792	0.19	118,000	72.00	26.06	8,742
Iowa-Illinois Gas & Electric	4,391	87	190,814	-0.06	226,496	0.29	478,462	63.04	36.96	57,840
KPL Gas Service	9,276	59	297,133	1.00	1,046,203	1.32	1,166,458	40.27	59.73	84,991
Kansas City Power & Light	9,828	57	396,597	2.99	0	0.00	704,839	98.84	0.00	93,100
Kansas Gas & Electric	7,927	67	249,970	0.91	0	0.00	512,126	98.50	0.00	94,961
Kentucky Utilities	12,918	49	375,000	2.74	0	0.00	541,799	100.00	0.00	73,650
Long Island Lighting	15,284	45	976,928	1.43	415,629	1.36	2,072,077	82.95	17.05	192,312
Louisville Gas & Electric	8,667	63	313,611	1.27	238,545	0.99	635,628	73.99	25.31	66,695
Madison Gas & Electric	2,084	98	107,938	1.59	79,220	3.48	202,133	61.76	37.86	19,034
Middle South Utilities*	57,631	8	1,678,302	0.65	224,811	-1.23	3,454,820	96.30	3.70	356,604
Midwest Energy*	3,483	92	155,341	0.19	338,056	2.25	537,820	41.15	50.04	33,063
Minnesota Power	8,823	61	116,704	0.60	8,826	0.65	426,145	90.52	1.75	64,397
Nevada Power	7,391	68	268,609	7.33	0	0.00	374,814	100.00	0.00	52,789
New England Electric*	19,741	34	1,204,189	2.46	0	0.00	1,448,193	94.85	0.00	168,772
New York State Electric & Gas	16,472	40	731,095	2.02	136,159	1.96	1,289,638	88.15	11.85	(199,399)
Niagara Mohawk Power	35,684	17	1,459,000	1.11	450,000	1.12	2,623,430	82.72	17.28	(557,214)
Northeast Utilities*	23,405	30	1,209,686	2.73	169,937	2.72	2,080,898	87.57	9.75	229,145
Northern Indiana Public Service	11,798	54	368,454	1.03	565,513	2.01	1,451,629	59.97	40.03	64,965
Northern States Power	31,641	20	1,259,846	2.28	324,445	2.94	1,770,329	84.59	14.86	188,264
Ohio Edison	29,710	23	1,005,121	1.06	0	0.00	1,822,100	98.69	0.00	364,657
Oklahoma Gas & Electric	18,854	36	634,414	-0.77	0	0.00	1,064,521	100.00	0.00	122,094
Orange & Rockland Utilities	4,088	89	236,264	2.93	100,473	2.76	451,318	75.41	23.80	36,963
Otter Tail Power	3,140	94	121,671	0.36	0	0.00	167,002	100.00	0.00	19,179
Pacific Gas & Electric	66,558	5	3,951,474	2.51	3,245,051	2.74	7,185,701	71.43	28.57	577,735
Pacificorp	26,086	28	666,200	0.50	0	0.00	2,162,500	50.79	0.00	248,600
Pennsylvania Power & Light	32,205	19	1,097,518	2.27	0	0.00	2,088,759	100.00	0.00	248,035
Philadelphia Electric	30,545	22	1,416,936	1.45	325,327	2.15	3,181,464	88.31	11.69	448,240
Pinnacle West Capital*	14,770	46	566,384	3.92	0	0.00	1,313,438	100.00	0.00	284,540
Portland General*	16,449	41	544,125	1.70	0	0.00	763,763	99.89	0.00	113,031
Potomac Electric Power	21,668	32	611,114	3.04	0	0.00	1,332,109	99.51	0.00	199,175
Public Service Enterprise Group*	34,730	18	1,809,547	1.76	1,412,063	1.93	4,211,055	70.28	28.97	520,451
Public Service of Colorado	18,357	37	967,083	0.94	831,973	1.49	1,657,435	64.90	33.99	160,103
Public Service of Indiana	19,086	35	563,626	1.38	0	0.00	1,070,454	100.00	0.00	219,905
Public Service of New Hampshire	6,953	73	365,521	4.11	0	0.00	549,108	100.00	0.00	(526,667)
Public Service of New Mexico	6,930	74	275,046	2.96	329,688	2.28	690,097	67.89	30.52	83,454
Puget Sound Power & Light	15,769	43	668,392	3.11	0	0.00	729,360	100.00	0.00	111,582
Rochester Gas & Electric	6,996	72	317,033	1.57	250,124	1.91	731,488	70.46	29.54	(168,711)
SCANA Corporation* (SCE&G)	14,328	47	412,253	2.92	192,062	1.09	1,115,973	72.38	14.48	128,865
San Diego Gas & Electric	12,496	51	990,395	5.28	621,858	4.54	1,904,228	66.24	15.43	183,058
Savannah Electric & Power	2,472	97	104,735	2.53	0	0.00	176,092	99.49	0.00	22,008
Sierra Pacific Power	4,315	88	216,274	3.33	67,219	-89.57	356,726	82.14	11.45	46,427
Southern California Edison	65,539	6	3,717,262	3.56	1,200	-0.74	5,494,465	99.97	0.01	738,531
Southern Company*	131,343	1	3,024,188	2.32	0	0.00	7,010,365	99.20	0.00	554,442
Southern Indiana Gas & Electric	4,593	85	111,981	1.30	68,094	2.09	278,546	83.92	15.48	31,791
Southwestern Public Service	15,809	42	346,934	-0.46	0	0.00	771,609	99.49	0.00	89,114
TECO Energy*	11,694	55	432,205	3.38	0	0.00	970,361	92.25	0.00	110,670
TNP Enterprises* (Tex-NM Power)	5,933	77	197,781	0.87	0	0.00	360,842	100.00	0.00	18,354
Texas Utilities*	77,773	3	2,094,866	0.97	0	0.00	4,082,923	100.00	0.00	679,976
Tucson Electric Power	6,377	75	254,194	3.68	0	0.00	471,823	100.00	0.00	130,844
Union Electric	29,008	24	1,052,772	1.65	108,726	1.42	1,946,411	96.05	3.78	297,356
United Illuminating	5,125	78	303,794	1.78	0	0.00	497,623	99.38	0.00	83,225
Utah Power & Light	18,053	38	522,971	1.28	0	0.00	982,797	99.88	0.00	139,859
Utilicorp United	3,973	91	240,021	60.59	392,526	2.19	594,860	38.19	61.81	27,393
Washington Water Power	3,714	62	242,000	0.83	85,000	2.41	398,509	82.52	17.48	51,252
Wisconsin Energy*	20,135	33	859,449	1.38	0	0.00	1,364,570	82.13	0.00	169,538
Wisconsin Power & Light	9,058	60	327,930	1.50	114,788	2.45	549,382	79.83	19.41	54,965
Wisconsin Public Service	8,351	66	312,858	1.72	166,178	2.00	580,456	73.98	26.02	49,020

Rank '87	Rank '86	Company	$ Income (millions)	'87% Change
1	1	Commonwealth Edison	977.7	4.29
2	4	Southern California Edison	738.5	3.45
3	5	Texas Utilities*	680.0	8.47
4	2	Pacific Gas & Electric	577.7	-37.54
5	3	Southern Company*	554.4	-37.20
6	14	Pacific Service Enterprise Group*	520.5	37.52
7	6	Consolidated Edison	512.3	0.78
8	7	American Electric Power*	502.5	-0.93
9	15	Detroit Edison	476.7	26.02
10	33	Philadelphia Electric	448.2	141.54

vice, 98th, reported substantial reductions in gas revenues because a number of large industrial customers initiated direct purchase agreements with producers and lower gas rates, as well as reduced electric revenues because of lower fuel costs, the effect of accounting changes to reflect reduced federal income tax requirements and removal of its cancelled Bailly nuclear plant amortization from rates.

Among the largest revenue producers, the six largest companies are the same as they were a year ago. But there were three changes among the next four ranked companies. FPL Group, the diversified holding company parent of Florida Power & Light, moved into 7th position, up one spot from 1986. Public Service Enterprise Group, the parent of Public Service Electric & Gas, slipped from 7th in last year's ranking to 8th this year. Duke Power, which was the 12th-largest revenue producer in 1986, moved into 10th position on the strength of its 1987 performance, replacing Houston Industries, parent of Houston Lighting & Power.

Top 100 net income fell

Net income available for common stock posted by the Top 100 Electric Utilities declined in 1987, falling 7.4 percent to $15.7-billion, only the second year of negative income growth in the 23 years *EL&P* has conducted its Top 100 survey. Income performance was only worse in 1985, when it was off 14.8 percent. In total, the $15.7-billion net income produced by the Top 100 Electric Utilities was lower than that produced in 1984 ($16.7-billion).

Moreover, as mentioned above, the 7.4-percent drop in net income included the positive effect of non-utility operations of holding companies. If you remove these non-utility operations from consideration, net income of utility-only operation of the Top 100 Electric Utilities dropped 9.2 percent.

The decline is the result of a variety of factors, including write-offs of unrecoverable plant costs, changes in accounting procedures and the effect of non-recurring and unusual expense items.

As usual, the companies recording the greatest gains in net income production were recovering from poor 1986 performances. Six of the ten fastest gainers were at the bottom of the income performance ranking a year ago and a seventh ranked 78th. These included: 1. Public Service of Colorado (96th in '86), +2,301 percent; 2. Kansas Gas & Electric (91st in '86), +1,575 percent; and 3. Portland General (95th in '86), +614 percent. Only Atlantic Energy, which ranked 9th this year with a gain of 34 percent, ranked near the top of the list (13th) a year ago.

There were numerous changes among the rankings of the largest in-

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Mergers could save money...

shaping the industry will consolidate two-thirds of the nation's public utilities, with resulting benefits to investors and consumers. This is the first quantifiable verification of our position," said Tirello.

"Since the study proves that mergers are economically viable, public regulators now have an obligation to consumers, in our view, to facilitate them," he stated.

How savings would be realized

The savings would come from reduced costs of handling customer accounts, energy pooling, and more efficient use of power generation and transmission assets.

Almost two-thirds ($2.02 billion) would come from the industry's improved ability to wheel power efficiently during periods of low demand. Savings from centralized and coordinated maintenance of power plants would be about $671 million, with administrative savings coming to $790 million. Other savings would result from combining utilities with relatively large disparities in rates, combining power generating mixes and administrative expenses, shutdown of natural-gas or oil-fired steam units, and mergers in service regions of at least one-million customers.

Merger process now starting

The merger trend projected in the study is already underway, said Tirello, noting actions with PacifiCorp/Utah Power & Light, the Southern Co./Savannah Electric and Duke Power/Nantahala.

After 30 years of construction, many utilities find themselves with about 10 percent too much capacity, Tirello said. "That excess, coupled with a reduced growth in demand, requires companies to become more aggressive in seeking new customers. Companies that can't compete effectively are obvious merger targets.

The best in 15 years

"But the industry's increased turbulence should not be mistaken for general weakness," Tirello added. "The electric utility industry has not looked better in 15 years, because two traditional killers—interest rates and inflation—have little impact now that [it] has stopped being essentially a construction/finance industry. Cash flow is up, and earnings are flat only because of regulatory caps on equity returns."

The report is entitled "Electric Utilities: The Case for Consolidation."

Other views

Industry officials and other analysts are skeptical of Tirello's views of consolidation and say recent merger activities do not support the study's contention.

Edison Electric Institute's Richard Braatz, vice president finance and regulation, said that with annual utility revenue of $120-130 billion, the amount of savings Tirello proposes falls within the margin of error for calculating the results. That is, such mergers could cause a $3.55-billion loss.

Braatz commended the study's efforts to quantify Tirello's theories and said many of the cost savings Tirello touts could be achieved in select cases. But assumptions, such as the availability of transmission during utility peaks and how such changes would occur in light of the Public Utilities Holding Company Act, cast doubt on the study.

Increasingly, Braatz pointed out, utilities are using spare transmission capacity to more efficiently use regionally available electricity.

Michigan Public Service Commission's Michael Fielek, director of policy, said commissions generally try to encourage agreements between utilities to foster greater savings and reliability, but doubted anyone would have the statutory or political power to mandate mergers. Initiative for acquisition would have to come as it has in the past, Fielek suggested, from the utilities.

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Top 100 utilities...

come producers. Commonwealth Edison carried over as the largest income producer, the same as last year. Southern California Edison (2nd) and Texas Utilities (3rd) both moved up two positions from last year. Southern Company (5th) fell two positions. Public Service Enterprise Group (6th) jumped from 14th a year ago. Consolidated Edison (7th) and American Electric Power both slipped down one position from last year. Detroit Edison (9th) moved into the Top 10 from 15th a year ago. And Philadelphia Electric (10th) jumped all the way from 33rd last year.

Common stock earnings

Average per share earnings fell in 1987 to $2.23 from $2.62 in 1986, according to final figures provided by the Top 100 Electric Utilities. This represents a 14.9-percent decline and is far below the average per-share earning of $3.27 recorded in 1984. The 1987 level is 31.8 percent below the 1984 high.

For 1987, 54 companies reported increases in earnings per common share and 45 reported declines. A year ago, 58 companies reported per-share gains. For 1984, the high-mark year for financial performances, 72 companies reported gains.

Per-share data was provided by 99 companies; Centel did not provide earnings information.

As mentioned above, the companies recording the greatest improvements in 1987 were those coming off of poor years in 1986. Only Atlantic Energy (9th) ranked near the top in 1986.

Median earnings growth rate was less than 1.0 percent. While this year's 0.85 percent gain was better than the 0.45 percent recorded in 1985, it was below 1986's 1.56 percent and substantially under the 10.32 percent median recorded in 1982, the high-mark year for earnings gains.

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